



GLAST Monthly PSR

Software

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Software Systems

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Accomplishments



► **Spacecraft**

- *Requirements derivation and decomposition to next level completed.*
 - *~ 80 FSW S/S Requirements → ~ 250 requirements in FSW Spec*
 - *Requirements entered and mapped/flowed in DOORS.*
 - *Peer Reviews for both C&DH (CDRL 13) and GNC (Not a deliverable) Requirements documents being organized.*
- *Peer Review for Software Development and Management Plan (SDMP) (CDRL 12) scheduled for later this month.*
- *Peer Review for FSW Test Plan (draft) (CDRL 15) scheduled.*
- *Review Coordination between Code 300 (Mark Goans, Steve Scott), Project, and Spectrum Astro to define contents of SC PDR FSW Presentation and the FSW PDR (CDRL #21) immediately following.*
 - *Code 300 has requested to chair/co-chair the FSW PDR.*
 - *Have initial feedback/guidelines regarding contents of each presentation. Met with Spectrum last week to review the guidelines. Content is there and we can make it work. Need to manage the expectations of Committee and project in advance so everyone understands what's presented where.*
 - *Summary: Generally, SC PDR FSW presentation will 'skim' material from across the more detailed FSW PDR (~ 4 hours).*
- *Data Interfaces documented in the SC-Instrument ICDs (CDRLs 2A/2B). In Review.*
- *IV&V beginning soon for their 60-day Startup Assessment.*



Accomplishments

► **Large Area Telescope (LAT)**

- *Final Report from the LAT Software Requirements Review (SRR) released.*
 - *Synopsis: Significant differences of approach remain between Goddard and SLAC. Generally following the SLAC methodology and injecting sufficient insight requests to ensure continued progress.*
- *Significant Project involvement in support of LAT Elex/FSW Peer Reviews of 3/18-19. Still work to do, but considerably improved over previous iterations.*
- *Note: Detailed Design only completed for EM1 FSW delivery at CDR time. EM2 and FU detailed designs will follow and include additional peer reviews (EM2 – Fall '03, FU – Spring '04)*
- *IV&V activities startup expected this month.*

► **GLAST Burst Monitor (GBM)**

- *Requirements are mature. Interfaces are well known and understood.*
- *Working the details of the LAT-GBM Interfaces*
- *No IV&V on the GBM.*

► **LAT – GBM ICD**

- *New document. Project office coordinating inputs from LAT and GBM team. Document ready for review.*



Accomplishments



► **Spacecraft Instrument Interface Simulator (SIIS)**

- *For GBM: Demonstration and Acceptance Test scheduled for PDR DR2 (currently April 24)*
 - *GBM SIIS requirements / design understood and acceptable to both Spectrum and Marshall teams.*
 - *Project working with Spectrum to define details of Acceptance Tests (and procedures) and coordinate TP and AstroRT/User's Guide documentation peer reviews.*
- *For LAT: Acceptance Test scheduled for 5/27.*
 - *LAT SIIS undergoing modifications to include LVDS signal discretes.*
 - *No impact to delivery date, but there were/are cost impacts.*
- *SIIS Maintenance Strategy*
 - *Received material from Spectrum documenting SIIS maintenance strategy.*
 - *Summary: "Please don't break"!*
 - *Spectrum is not Procuring Spare SIIS Equipment to Maintain in Stores*
 - *Defective Devices Need to be Shipped Back to Spectrum for Repair*
 - *Spectrum Engineers are Available via Phone or Email to Support SIIS Software Problem Resolution*
 - *Spectrum Plans to Use the MOC Training Simulator Prior to Delivery as the SIIS Software Maintenance Environment*



Issues/Problems

► **LAT FSW**

- *Tight schedule. Portions of the development team need to produce code at 40 SLOC per day.*
- *Success path to I&T. No margin for errors / problems.*
- *Immature Test Approach / No independent FSW test team. The team will rely on developers not just for unit test, but also for build level testing.*
- *Risk in design approach – detailed design of multi-tower and full inter-processor comms links on hold until late in development cycle.*

► **GBM FSW**

- *None. Working the issues in a timely manner*

► **SC FSW**

- *None. Working the issues in a timely manner*



Upcoming Events

► **Spacecraft**

- *FSW PDR (and SC PDR) presentation preparation*
- *Document Reviews: CDRL 12, CDRL 13, CDRL 15, GNC Requirements.*
- *SIIS: Acceptance Tests / Ship / Train / Maintain*

► **LAT**

- *CDR Dry Runs*
- *CDR*
- *EM1 FSW Delivery to I&T 8/1/03*
- *SIIS Delivery from Spectrum*

► **GBM**

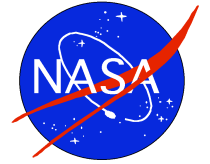
- *FSW Detailed Design / FSW Test Plan*
- *SIIS Delivery from Spectrum*

► **GBM-LAT ICD**

- *Project Office / Instruments (and Spectrum) Review*



Rolling Wave Schedule



- ▶ ***Included with SC and Instrument Rolling Wave...***